

Amendment to the Claims:

This listing of claims will replace all prior versions, and listing, of claims in the application.

Listing of Claims:

Claim 13. (currently amended) A computer implemented method for creating, formatting or editing a database model of a physical environment, comprising the steps of:

- a) using a computer file for editing one or more objects defining a modeled environment in which an in-building or campus communications network is or will be deployed, said environment having one or more of floors, walls, partitions, building, building complexes or compounds, terrain, foliage, or other sites or obstructions;
- b) verifying, using a computer, the sufficiency of said one or more objects to ensure a useful definition of said modeled environment and notifying a user of results of said verification of sufficiency;
- c) generating asset of formatted data based at least in part of said verification of sufficiency for use in at least one of: a communications engineering ~~or~~ and network management application; and
- d) rendering a three-dimensional view of said modeled environment.

Claim 14. (original) The method of claim 13, further comprising the step of editing an object in said set of formatted data.

Claim 15. (original) The method of claim 13, further comprising the steps of moving an object in said set of formatted data.

Claim 16. (original) The method of claim 13, further comprising the step of modifying one or more objects in said set of formatted data.

Claim 17. (currently amended) The method of claim 13 wherein said step of using a computer file for editing includes the step of removing extraneous drawing objects from said one or more objects.

Claim 18. (currently amended) The method of claim 13 wherein said step of using a computer file for editing includes at least one of the step steps of accepting a scanned image ~~or~~ and accepting a drawing.

Claim 19. (currently amended) The method of claim 13 wherein said step of using said computer file for editing includes the step of modifying one or more of electrical properties, physical properties, aesthetic properties, and spatial configurations of one or more objects of said one or more objects.

Claim 20 (original) The method of claim 13 wherein said notifying performed in said verifying and notifying step if performed in an automatic fashion without feedback being provided to the user.

Claim 21. (original) The method of claim 13 wherein said notifying performed in said verifying and notifying step in performed by prompting the user and, when required to provide said useful definition, requires the user to correct any insufficiencies in response to an insufficiency notification.

Claim 22 (original) The method of claim 13 wherein said communications engineering or network management application is selected from the group consisting of one or more of wireless propagation prediction, measurement tools, component placement or layout visualization tools, optimization tools, all of materials generating tools and network performance management or production tools.

Claim 23 (currently amended) The method of claim 13 further comprising one of the steps of the step of adding or and removing at least one object in said of formatted data.

Claim 24 (currently amended) The method of claim 13 further comprising the step of one of the steps of specifying or and invoking a propagation model for performing prediction of performance.

Claim 25 (currently amended) The method of claim 13 further comprising one of the steps of the step of specifying or and invoking a listing of communications equipment.

Claim 26 (currently amended) The method of claim 13 further comprising the steps of:

accepting at least one raster image file representing said physical environment;
and
scaling said at least one raster image file for incorporation into one of either said using a computer file for editing step ~~or~~ and said set of formatting data generated in said generating step.

Claim 27 (currently amended) The method of claim 13 wherein said step of verifying performs one or more of the following:

- (i) removing unused and un-referenced objects from said one or more objects;
- (ii) removing unnecessary data selected from the group consisting of legends, initials, maps, map layers, text and extraneous drawing objects;
- (iii) objects have been assigned attenuation factors;
- (iv) objects have been assigned colors;
- (v) objects have been assigned physical or electrical information;
- (vi) intersection of objects with floors, ceiling and other objects have been located.
- (vii) buildings are aligned with terrain;
- (viii) floors of a building are aligned with one another;
- (ix) determining if database has been verified previously;

- (x) determining if database is newly created, altered, modified, amended, edited, previously formatted or not previously formatted;
- (xi) specifying at least one reference point;
- (xii) scaling one more objects of said one or more objects
- (xiii) scaling a raster image;
- (xiv) adding measurements at side specific locations;
- (xv) creating a legend for the drawing
- (xvi) creating a boundary around drawing;
- (xvii) ~~specifying or~~ invoking communications equipment listing;
- (xviii) ~~specifying or~~ invoking a propagation model for performing predictions of performance; and
- (xix) specifying an air interface standard or operating frequency.

Claim 28 (original) The method of claim 13 wherein said generating step generates an editable database wherein on or more electrical properties, physical properties, aesthetic properties, and spatial configurations of one or more objects within said database can be altered.

Claim 29. (original) The method of claim 13 wherein said generating step generates set of formatted data in a form transportable to and usable by said communications engineering or network management application.

Claim 30 (currently amended) An apparatus for creating, formatting or editing a database model of a physical environment, comprising:

computer implemented means for editing one or more ~~objects~~ object files defining a modeled environment in which an in-building or campus communications network is or will be deployed having at least one of: floors, walls, partitions, buildings, building complexes ~~or~~ compounds, terrains, foliage, ~~or~~ and other sites or obstructions;

means for verifying, by computer, the sufficiency of said one or more objects to ensure a useful definition of said modeled environment and notifying a user of results of said verification of sufficiency;

means for generating a set of formatted data based at least in part on said verification of sufficiency for use in a communications engineering or network management application; and

means for rendering a three dimensional view of said modeled environment.

Claim 31 (currently amended) The apparatus of claim 30 further comprising a means for adding ~~or~~ and removing at least one object in said set of formatted data.

Claim 32 (original) The apparatus of claim 30 further comprising a means for moving an object in said set of formatted data.

Claim 33 (original) The apparatus of claim 30 further comprising a means for modifying one or more objects in said set of formatted data.

Claim 34 (original) The apparatus of claim 30 further comprising a means for editing one or more objects in said set of formatted data.

Claim 35 (original) The apparatus of claim 30 wherein said computer implemented means for editing removes extraneous drawing objects from said one or more objects.

Claim 36 (original) The apparatus of claim 30 wherein said computer implemented means for editing includes means for accepting a scanned image or drawing.

Claim 37 (original) The apparatus of claim 30 wherein said means for editing includes a means for modifying one or more of electrical properties, physical properties, aesthetic properties, and spatial configurations of one or more objects of said one or more objects.

Claim 38 (original) The apparatus of claim 30 notifying performed by said means for verifying and notifying is performed in an automatic fashion without feedback being provided to the user.

Claim 39 (original) The apparatus of claim 30 wherein notifying performed by said means for verifying and notifying is performed by prompting the user and, when required to provide said useful definition, requires the user to correct any insufficiencies in response to an insufficiency notification.

Claim 40 (original) The apparatus of claim 30 wherein said communications engineering or network management application is selected from the group consisting of one or more of wireless propagation prediction, measurement tools, component placement or layout visualization tools, optimization tools, ill of materials generating tools, and network performance management or prediction tools.

Claim 41 (original) The apparatus of claims 30 further comprising a means for adding measurements to said set of formatted data.

Claim 42 (original) The apparatus of claim 30 further comprising a means for scaling at least one part of said set of formatted data.

Claim 43 (original) The method of claim 13 further comprising the step of scaling at least one part of said formatted data.

Claim 44 (currently amended) The apparatus of claim 30 further comprising means for specifying ~~or~~ and invoking a propagation model for performing predictions of performance

Claim 45 (currently amended) The apparatus of claim 30 further comprising a means of specifying ~~or~~ and invoking a listing of communications equipment.

Claim 46 (currently amended) The apparatus of claim 30 further comprising:

means for accepting at least one raster image file representing said physical environment; and

means for scaling said at least one raster image file for incorporation into either one of said computer implemented means for editing or and said set of formatted data generated by said means for generating.

Claim 47 (currently amended) The apparatus of claim 30 wherein said means for verifying performs one or more of the following:

- (i) removing unused and un-referenced objects from said one or more objects;
- (ii) removing unnecessary data selected from the group consisting of legends, initials, maps, map layers, text, and extraneous drawing objects;
- (iii) objects have been assigned attenuation factors;
- (iv) objects have been assigned colors;
- (v) objects have been assigned physical or electrical information;
- (vi) intersection of objects with floors, ceilings and other objects have been located;
- (vii) buildings are aligned with terrain;
- (viii) floors of a building are aligned with one another;
- (ix) determining if database has been verified previously;
- (x) determining if database is newly created, altered, modified, amended, edited, previously formatted or not previously formatted;

- (xi) specifying at lease one reference point;
- (xii) scaling one or more objects of said one or more objects
- (xiii) scaling a raster image;
- (xiv) adding measurements at site specific locations
- (xv) creating a legend for the drawing;
- (xvi) creating a boundary around drawing;
- (xvii) specifying ~~or invoking~~ communications equipment listing;
- (xviii) specifying ~~or invoking~~ a propagation model for performing predictions of performance; and
- (xix) specifying an air interface standard or operating frequency

Claim 48 (original) The apparatus of claim 30 wherein said means for generating generates an editable database wherein one or more electrical properties, physical properties, aesthetic properties, and spatial configurations of one or more objects within said database can be altered.

Claim 49 (original) The apparatus of claim 30 wherein said means for generating generates set of formatted data in a form transportable to and unable by said communications engineering nor network management application.

Claim 50 (currently amended) The method of claim 18 further comprising the steps of tracing said at least one accepted ~~at least one~~ scanned image ~~or~~ and drawings, and

adding one or more traced objects from said tracing step to said one or more objects
defining said modeled environment.

Claim 51 (original) The method of claim 13 further comprising the steps of reading
in one or more files into said computer and determining the type of file read in said
reading step by the contents of said one or more files

Claim 52 (original) The method of claim 13 wherein at least a portion of said
generating step occurs prior to said verifying step.

Claim 53 (original) The method of claim 13 wherein said generating step occurs
after said verifying step.

Claim 54 (original) The method of claim 13 further comprising the step of adding
measurements to said set of formatted data generated ins aid generating step.

Claim 55 (currently amended) The method of claim 13 further comprising the step
of adding at least one of measured ~~or~~ and predicted values to said one or more objects
which are edited in at least one of said using a computer for editing step ~~or~~ and
represented in said formatted data.

Claim 56 (currently amended) The method of claim 13 further comprising the step of scaling ~~all or a~~ at least a portion of said set of formatted data generate in said generating step.

Claim 57 (currently amended) The method of claim 13 further comprising the step of scaling ~~all or a~~ at least a portion of said one or more objects that are edited in said using a computer for editing step.

Claim 58 (currently amended) The apparatus of claim 36 wherein said computer implemented means for editing ~~removes~~ scales extraneous information ~~or scales from~~ said accepted scanned image or drawing.

Claim 59 (original) The apparatus of claim 30 further comprising means for reading in one or more files into said computer and means for determining the type of file read by the contents of said one or more files.

Claim 60 (original) The apparatus of claim 36 further comprising means for tracing said scanned image or drawing, and means for adding one or more traced objects to said one or more objects defining said modeled environment.

Claim 61 (original) The apparatus of claim 30 where said means for generating generates at least a portion of said formatted data prior to said means for verifying verifies the sufficiency of said one or more objects.

Claim 62 (original) The apparatus of claim 30 wherein said means for generating generates said formatted data after said means for verifying verifies the sufficiency of said one or more objects.

Claim 63 (currently amended) The method of claim 18 wherein said step of using a computer file for editing removes extraneous information ~~or~~ and scales said scanned image or drawing.

Claim 64 (currently amended) The apparatus of claim 30 further comprising means for of adding at least one of measured ~~or~~ and predicted values to said one or more objects which are edited by said computer implemented means for editing ~~or are represented in said formatted data.~~

Claim 65 (currently amended) The apparatus of claim 30 further comprising means for scaling at least ~~all of~~ a portion of said set of formatted data generated by said means for generating.

Claim 66 (currently amended) The apparatus of claim 30 further comprising means for scaling ~~all of~~ at least a portion of said one or more objects that are edited by said computer implemented means for editing.